

CLAIMS

We claim:

1. A guide rail (24) for use in an elevator system, comprising:
 - a first material body having a nose portion (32); and
 - 5 a second material (40) secured to at least some of the nose portion.
2. The guide rail (24) of claim 1, wherein the first material comprises aluminum and the second material comprises steel.
- 10 3. The guide rail (24) of claim 1, including a bonding agent (42) securing the second material to the nose portion.
4. The guide rail (24) of claim 3, wherein the bonding agent (42) comprises at least one of an adhesive or concrete.
- 15 5. The guide rail (24) of claim 1, wherein the second material establishes a covering (40) that extends along an entire longitudinal length of the guide rail covering at least the nose portion.
- 20 6. The guide rail (24) of claim 1, wherein the body comprises aluminum and the second material comprises a steel sheet (40) that is shaped to conform to the nose portion (32) and including a bonding agent (42) between the steel sheet and the nose portion.
- 25 7. The guide rail (24) of claim 1, wherein the nose portion (32) has a guiding surface (34) on opposite sides of the nose portion and a braking region near an end (36) of the nose portion and wherein the second material is only on the braking region of the nose portion.
- 30 8. The guide rail (24) of claim 7, wherein the second material is a covering (40) that comprises a steel sheet extending over the braking region on each side of the nose portion (32).

9. The guide rail (24) of claim 8, wherein the covering (40) extends along an entire longitudinal length of the nose portion (32).

5 10. The guide rail of claim 1, wherein the nose portion (32) includes at least one recess (50) and the second material has a portion (52) extending at least partially into the recess.

10 11. The guide rail of claim 1, wherein the body comprises a base portion (30) that is adapted to be secured to a stationary structure and the nose portion (32) extends away from the base portion at an oblique angle.

12. The guide rail of claim 1, including an insulating layer (60) between the nose portion (32) and the second material.

15 13. The guide rail of claim 12, wherein the insulating layer (60) comprises a fiber mesh.

20 14. The guide rail of claim 13, wherein the mesh (60) comprises a glass fiber fabric.

15. A method of making a guide rail (24) for use in an elevator system, comprising:

5 forming a rail body using a first material; and
covering at least a portion of the rail with a second material.

16. The method of claim 15, wherein the first material comprises aluminum and the second material comprises steel.

10 17. The method of claim 15, including securing the second material to the rail body using a bonding agent (42).

15 18. The method of claim 15, including forming an elongated clip (40) comprising the second material and subsequently placing the clip over the corresponding portion of the rail body.

19. The method of claim 15, including forming the rail body to have a base (30) and a nose portion (32) and orienting the nose portion at an oblique angle relative to the base.

20 20. The method of claim 15, including forming some of the second material to extend into at least one recess (50) on the rail body.

25 21. The method of claim 15, including installing the rail body in a hoistway and subsequently moving a tool along the installed rail body to secure the second material covering in place.

22. The method of claim 21, including using an automated robot that climbs the rail.

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1AP20 Rec'd PCT/PTO 30 MAY 2006
AMENDED CLAIMS

[Received by the International Bureau on 13 Aug 2004 (13.08.04):
Original claims 1- 22 replaced by amended claims 1-20]

We claim:

1. A guide rail (24) for use in an elevator system, comprising:
 - a first material body having a nose portion (32); and
 - a second material (40) secured to at least some of the nose portion, wherein the first material comprises aluminum and the second material comprises steel.
2. The guide rail (24) of claim 1, wherein the second material establishes a covering (40) that extends along an entire longitudinal length of the guide rail covering at least some of the nose portion (32).
3. The guide rail (24) of claim 1, wherein the second material comprises a steel sheet (40) that is shaped to conform to the nose portion (32) and including a bonding agent (42) between the steel sheet and the nose portion.
4. The guide rail of claim 1, wherein the nose portion (32) includes at least one recess (50) and the second material has a portion (52) extending at least partially into the recess.
5. The guide rail of claim 1, including an insulating layer (60) between the nose portion (32) and the second material.
6. The guide rail of claim 5, wherein the insulating layer (60) comprises a fiber mesh.
7. The guide rail of claim 6, wherein the mesh (60) comprises a glass fiber fabric.
8. A guide rail (24) for use in an elevator system, comprising:
 - a first material body having a nose portion (32);
 - a second material (40) secured to at least some of the nose portion; and
 - a bonding agent (42) securing the second material to the nose portion.
9. The guide rail (24) of claim 8, wherein the bonding agent (42) comprises at least one of an adhesive or concrete.

10. A guide rail (24) for use in an elevator system, comprising:
 - a first material body having a nose portion (32); and
 - a second material (40) secured to at least some of the nose portion, wherein the nose portion (32) has a guiding surface (34) on opposite sides of the nose portion and a braking region near an end (36) of the nose portion and wherein the second material is only on the braking region of the nose portion (32).
11. The guide rail (24) of claim 10, wherein the second material is a covering (40) that comprises a steel sheet extending over the braking region on each side of the nose portion (32).
12. The guide rail (24) of claim 11, wherein the covering (40) extends along an entire longitudinal length of the nose portion (32).
13. A guide rail (24) for use in an elevator system, comprising:
 - a first material body having a nose portion (32); and
 - a second material (40) secured to at least some of the nose portion, wherein the body comprises a base portion (30) that is adapted to be secured to a stationary structure and the nose portion (32) extends away from the base portion at an oblique angle.
14. A method of making a guide rail (24) for use in an elevator system, comprising:
 - forming a rail body using a first material that comprises aluminum; and
 - covering at least a portion of the rail with a second material that comprises steel.
15. The method of claim 14, including forming an elongated clip (40) comprising the second material and subsequently placing the clip over the corresponding portion of the rail body.
16. The method of claim 14, including forming some of the second material to extend into at least one recess (50) on the rail body.

17. The method of claim 14, including installing the rail body in a hoistway and subsequently moving a tool (100) along the installed rail body to secure the second material covering (40) in place.

18. The method of claim 17, including using an automated robot (100) that climbs the rail.

19. A method of making a guide rail (24) for use in an elevator system, comprising:

forming a rail body using a first material;
covering at least a portion of the rail body with a second material; and
securing the second material to the rail body using a bonding agent (42).

20. A method of making a guide rail (24) for use in an elevator system, comprising:

forming a rail body using a first material;
covering at least a portion of the rail body with a second material; and
forming the rail body to have a base (30) and a nose portion (32) and orienting the nose portion at an oblique angle relative to the base.